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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/592,921

09/14/2006

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EXAMINER

KENNEDY, NICOLETTA

ART UNIT

PAPER NUMBER

1611

NOTIFICATION DATE

DELIVERY MODE

11/16/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentgroupus@unilever.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/592,921	<b>Applicant(s)</b> GILES ET AL.	
	<b>Examiner</b> Nicoletta Kennedy	<b>Art Unit</b> 1611	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-9 and 11 are currently pending.

### ***Priority***

This application, filed September 14, 2006, is a national stage entry of PCT/EP05/01454 filed February 10, 2005, and claims foreign priority to EPO application 04251506.4, filed March 17, 2004. The International Bureau has provided a certified copy of the EPO application.

### ***Withdrawn Rejections***

1. The rejection of claim 10 under 35 U.S.C. 101 and 112, is withdrawn in light of applicants' amendment filed 7/27/09.

### ***Response to Arguments***

Applicants arguments are persuasive as to the lack of motivation to combine Tadlock et al. with Minegishi et al. The rejection of claims 1-11 under 35 U.S.C. 103(a) as being unpatentable over Tadlock et al. (US 2004/0115159) in view of Minegishi et al. (US 4,102,795) is withdrawn.

### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al. (US 2003/0190302) (pub. Oct. 9, 2003) in view of Pereira et al. (US 2003/0186834) (pub. Oct. 2, 2003).

Regarding claim 1, Frantz et al. teach a cationic formulation that may be used as a shampoo comprising cetrimonium chloride at 0.96% (table 5) and hydroxyethyl cetyldimonium phosphate at 0.97% (figure 1, para. 0032, table 10). The formulations may also include cetrimonium bromide at 0.50% (table 4), myrtrimonium bromide, cocotrimonium methosulfate at 0.97% (table 9), olealkonium chloride at 0.98% (table 8)

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and stearalkonium chloride at 0.99% (table 7) (figure 1). The cationic surfactants used in the formulation may be quaternary ammonium compounds as shown in figure 1. The quaternary ammonium compounds may be imidazoline derivatives such as isostearyl benzylimidonium chloride, cocoyl benzyl hydroxyethyl imidazolinium chloride, and others (para. 0061). The amount of cetrimonium chloride is within the range claimed in claim 1. The amount of hydroxyethyl cetyldimonium phosphate is slightly higher. However, MPEP 2144.05 states that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties" (quoting *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 774 (Fed. Cir. 1985)). Further, MPEP 2144.05 states that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" quoting *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Here, the general conditions of using hydroxyethyl cetyldimonium phosphate are known and modifying the concentration is not inventive.

However, Frantz et al. does not specifically teach a di-(C<sub>20</sub>-C<sub>24</sub>) imidazoline quaternary surfactant. Pereira et al. cure this deficiency.

Pereira et al. teach imidazoline quats and quat mixtures used in personal care products including shampoos (abstract and para. 0006). At least a portion of the mixture includes at least one dialkyl imidazoline quat having at least one C<sub>16</sub>-C<sub>30</sub> alkyl group (abstract).

It would have been *prima facie* obvious to a person of ordinary skill in the art to have combined the teachings of Frantz et al. with those of Pereira et al. to incorporate a di-alkyl imidazoline quaternary surfactant into the formulation. One would have been motivated to do so because Frantz et al. teach that imidazoline derivatives may be used but only provides a few limited examples. Pereira et al. teach that dialkyl imidazoline "having at least one C<sub>16</sub>-C<sub>30</sub> alkyl group are known in the art to be used in shampoo compositions and therefore, one would have been motivated to substitute a dialkyl imidazoline "having at least one C<sub>16</sub>-C<sub>30</sub> alkyl group for the imidazoline derivative quaternary surfactants taught by Frantz et al.

With regard to the range of the dialkyl imidazoline "having at least one C<sub>16</sub>-C<sub>30</sub> alkyl group, the components taught by Frantz et al. in figure 1 range from 0.50% to 0.99% and therefore, substituting the dialkyl imidazoline "having at least one C<sub>16</sub>-C<sub>30</sub> alkyl group for one of the components taught by Frantz et al. would satisfy this claimed range as explained above.

Regarding claim 2, Frantz et al. teach that mixtures of cationic surfactants may be used as shown in figure 1 (para. 0062 and figure 1). MPEP 2144.05 states that "[i]n the case where the claimed ranges 'overlap or lie inside ranges disclosed by the prior art' a *prima facie* case of obviousness exists" quoting *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). In the instant case, the claimed range lies inside the range taught by Frantz et al. and is therefore *prima facie* obvious.

Regarding claim 3, the components taught by Frantz et al. in figure 1 range from 0.50% to 0.99% and therefore, substituting the dialkyl imidazoline "having at least

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one C<sub>16</sub>-C<sub>30</sub> alkyl group for one of the components taught by Frantz et al. would satisfy this claimed range as explained above.

Regarding claim 4, Frantz et al. teach that the amount of hydroxyethyl cetyldimonium phosphate is 0.97% (table 10). However, MPEP 2144.05 states that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties" (quoting *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 774 (Fed. Cir. 1985)). Further, MPEP 2144.05 states that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" quoting *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Here, the general conditions of using hydroxyethyl cetyldimonium phosphate are known and modifying the concentration is not inventive.

Regarding claim 5, Frantz et al. teach that the formulation may comprise suitable hair conditioners including cetyl alcohol (para. 0098).

Regarding claim 6, Frantz et al. teach that water is present at 26% (table 3). However, Pereira et al. teach that the amount of water in a shampoo formulation may range from about 20% to about 90% (para. 0144). MPEP 2144.05 states that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" quoting *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Here, the general conditions of using water are known and modifying the amount is not inventive.

Regarding claim 7, Frantz et al. teach that the formulation may comprise silicones or silicon derivatives as a hair conditioning agent (claims 18-19).

Regarding claim 9, Frantz et al. teach that the formulation may comprise mineral oils, cocoa butter or soybean oil to soften hair (paras. 0088-0089).

Regarding claim 11, Frantz et al. teach applying the formulation to wet hair (paras. 0159 to 0165).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al. (US 2003/0190302) (pub. Oct. 9, 2003) in view of Pereira et al. (US 2003/0186834) (pub. Oct. 2, 2003) as applied to claims 1-7, 9 and 11 above, and further in view of Minegishi et al. (US 4,102,795) (pub. July 25, 1978).

The combination of Frantz et al. in view of Pereira et al. teach each limitation of claim 1 but fail to teach that the formulation further comprises a hydrophobically treated clay. Minegishi et al. cure this deficiency.

Minegishi et al. teach the inclusion of a hydrophobically treated clay, specifically betonites, as a suspending/antiagglomerating agent for a hair care composition comprising cationic surfactants (abstract and column 14, lines 11-39).

It would have been prima facie obvious to a person of ordinary skill in the art to have combined the teachings of Frantz et al. and Pereira et al. with those of Minegishi et al. to incorporate a hydrophobically treated clay into the hair care formulation. One would have been motivated to do so to keep the formulation from agglomerating.

***Conclusion***

No claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicoletta Kennedy whose telephone number is (571)270-1343. The examiner can normally be reached on Monday through Thursday 8:15 to 6:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Gollamudi Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. K./  
Examiner, Art Unit 1611

/David J Blanchard/  
Primary Examiner, Art Unit 1643